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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,671	02/19/2004	Tapesh Yadav	037768-0114	1995

22428 7590 02/23/2007  
FOLEY AND LARDNER LLP  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER
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VIJAYAKUMAR, KALLAMBELLA M

ART UNIT	PAPER NUMBER
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1751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/780,671

Applicant(s)

YADAV, TAPESH

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

- Acknowledge the claiming of the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) over 60/449,626 filed 02/24/2003.
- Applicant's election with traverse of Gp-I, Claims 1-5, in the reply filed on 11/28/2006 is acknowledged. The traversal is on the ground(s) that it would not be a serious burden to search Gps I and VI. This is not found persuasive because the search for Gp-VI is not required for Gp-I, and the Gp-I composition could be made by an entirely different process as shown in the prior art used in the current office action. Claims 6-20 are withdrawn from further consideration.  
The requirement is still deemed proper and is therefore made FINAL.
- The examiner has considered the IDS filed 7/6/2004.

### **Specification**

The abstract is objected to for not meeting the length requirements.

The abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 150 words. The abstract should not exceed 25 lines of text. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should sufficiently describe the disclosure to assist readers in deciding whether there is a need for consulting the full patent text for details. See 37 CFR 1.72(a) and MPEP § 606.

### ***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1751

1. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Lieber et al (US 5,897,945).

Lieber et al teach the composition of acicular nanorods with the formula  $M^1_x M^2_y O_z$ , wherein the binary oxides include  $Al_2O_3$  and ZnO. The prior art further teaches doped ZnO nanorods with the formula  $In:ZnO$ . The nanorods had a diameter of 1-200 nm and a length of 0.01-300 microns (CI-2, Ln 43-51; CI-3, Ln 27-53; Claims 7-10). With regard to the conductivity in claims 1 and 3, the prior art composition is either same or substantially same as that claimed by the applicants, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Shall et al (US 2003/0145681).

Shall et al teach the composition of acicular Cu/Zn alloy nanoparticles with a diameter less than 20 nm and an aspect ratio of greater than 1 (Abstract). With regard to the conductivity in claims 1 and 3, the prior art composition is either same or substantially same as that claimed by the applicants, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bickmore et al (US 5,984,997).

Bickmore et al teach the composition of Cu doped Ni-Zn-Ferrite and Cu-doped Zn-Sn-Oxide nanoparticles with a diameter of 29 nm and 40-50 nm respectively (CI-8, Examples 5 and 6). With regard to the conductivity in claim 1, the prior art composition is either same or substantially same as that claimed by the applicants, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Gray et al (US 5,985,173).

Art Unit: 1751

Gray et al teach the composition of nanoparticle phosphors such as ZnS:Cu,Al with a particle size of 1-30 nm (Cl-3, Ln 5-10; Cl-6, Ln 9-29). With regard to the conductivity in claims 1 and 3, the prior art composition is either same or substantially same as that claimed by the applicants, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

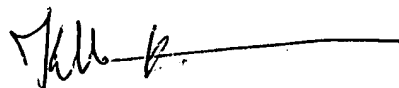
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8.30-6.00 Mon-Thu, 8.30-5.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KMV  
Feb 08, 2007.



K. M. Vijayakumar  
Patent Examiner